

PATENT

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### ABSTRACT OF THE DISCLOSURE

A DLL circuit for phase matching of a periodic input signal, having a variable delay unit, having a delay element and having a regulation unit which has a regulation device, for setting an input signal delay in the delay unit, and a comparator unit, in order to generate a phase signal in each signal cycle, the state of which phase signal indicates that the input signal is leading or lagging a signal which has been delayed by the variable delay unit and the delay element, and which is provided to the regulation device during a steady-state operating phase, with the regulation device increasing the delay of the delay unit during an initial transient phase until a change in the phase signal indicates a change from identified lagging of the input signal to leading of the input signal, wherein the regulation unit has a filter circuit in order to provide a filtered phase signal to the regulation device during the initial transient phase, with the filter circuit changing the state of the filtered phase signal to the state of the phase signal only when a different state of the phase signal with respect to the state of the filtered phase signal has been detected for a predetermined number of successive signal cycles.